

1. (Previously Presented) Apparatus for closing a wound comprising:

a first elongated substrate including first and second surfaces; and

a second elongated substrate including first and second surfaces,

wherein the second surfaces are configured to mate with each other,

wherein the first surfaces are covered by a multiplicity of barbs for adhering to the wound.

2. (Previously Presented) The apparatus of claim 1, wherein the multiplicity of barbs projects from the first surface.

3. (Previously Presented) The apparatus of claim 2, wherein each elongated substrate further comprises portions defining a plurality of perforations that extend from the first surface to the second surface.

4. (Previously Presented) The apparatus of claim 3, wherein the plurality of perforations define suture eyelets.

5. (Previously Presented) The apparatus of claim 1, wherein each elongated substrate further comprises a coating of a therapeutic agent.

6. (Previously Presented) The apparatus of claim 1, wherein each elongated substrate is impregnated with a therapeutic agent.

7. (Previously Presented) The apparatus of claim 1 further comprising a therapeutic agent selected from a family of angiogenic growth factors.

8. (Previously Presented) The apparatus of claim 1, wherein the first and second surfaces are tied together using a suture.

9.-13. (Canceled)

14. (Previously Presented) The apparatus of claim 1, wherein each elongated substrate comprises a series of units interconnected by joints.

15.-17. (Canceled)

18. (Currently Amended) A method for performing an anastomosis comprising:

providing a device comprising an elongated tubular substrate of a biocompatible material having a first surface coated or impregnated with a therapeutic agent, ~~and~~ multiple rows of barbs projecting from the first surface;

positioning the elongated substrate within a wound so that the multiplicity of barbs is directed towards the tissue defining a perimeter of the wound; and

squeezing the perimeter of the wound against the multiplicity of barbs to adhere the perimeter of the wound to the elongated substrate.

19. (Currently Amended) The method of claim 18 ~~wherein providing a device comprises providing a device~~

~~coated or impregnated with a therapeutic agent, the method~~  
further comprising, during wound healing, releasing a  
predetermined amount of therapeutic agent into the vicinity  
of the wound.

20. (Previously Presented) A method for  
closing a tissue wound comprising:

providing a device comprising first and second  
elongated substrate halves, each of the first and second  
elongated substrate halves comprising a biocompatible  
material having a first surface and a multiplicity of barbs  
projecting from the first surface;

positioning the first elongated substrate half  
within a wound so that the multiplicity of barbs is  
directed towards the tissue defining a first portion of the  
perimeter of the wound;

squeezing the first portion of the perimeter of  
the wound against the multiplicity of barbs to adhere the  
first portion of the perimeter of the wound to the first  
elongated substrate half;

positioning the second elongated substrate half  
within the wound so that the multiplicity of barbs is  
directed towards the tissue defining a second portion of  
the perimeter of the wound; and

squeezing the second portion of the perimeter of  
the wound against the multiplicity of barbs to adhere the  
second portion of the perimeter of the wound to the second  
elongated substrate half; and

moving the first and second substrate halves into  
apposition.

21. (Previously Presented) The method of claim 20 wherein moving the first and second substrate halves into apposition comprises threading suture material through eyelets in the first and second elongated substrate halves and knotting the suture material.

22. (Currently Amended) Apparatus for closing a wound comprising:

an elongated substrate comprising a biocompatible material, the elongated substrate having a first and a second surface, a plurality of perforations extending from the first surface and adapted to define suture eyelets; and

multiple rows of barbs projecting from the first and second surfaces,

wherein the multiple rows of barbs have tissue-penetrating distal ends.

23. (Canceled)

24. (Previously Presented) The apparatus of claim 22, wherein the elongated substrate further comprises a coating of a therapeutic agent.

25. (Previously Presented) The apparatus of claim 22, wherein the elongated substrate is impregnated with a therapeutic agent.

26. (Previously Presented) The apparatus of claim 22, wherein each barb includes a shank coupling the tissue-penetrating distal end to the substrate, and one or more projections from the shank.

27. (Previously Presented) The apparatus of claim 26, wherein each barb is cut from the substrate.

28. (Previously Presented) The apparatus of claim 22, wherein the elongated substrate has the form of a tube.

29. (Previously Presented) The apparatus of claim 28, wherein the tube includes an interior lumen formed by the first surface.

30. (Previously Presented) The apparatus of claim 28, wherein the tube includes an exterior surface forming the first surface.

31. (Previously Presented) The apparatus of claim 22 further comprising a stent-like structure, wherein the elongated substrate forms a side anastomosis site of the apparatus.

32. (Previously Presented) The apparatus of claim 22, wherein the elongated substrate comprises a series of units interconnected by joints.

33. (Previously Presented) The apparatus of claim 22 further comprising a region of artificial cartilage coupled to the elongated substrate.

34. (Previously Presented) The apparatus of claim 22 further comprising a replacement intervertebral disc coupled to the elongated substrate.

35. (Currently Amended) Apparatus for closing a wound comprising:

an elongated substrate comprising a biocompatible material and a therapeutic agent, the elongated substrate having a first surface; and

multiple rows of barbs projecting from the first surface, the multiple rows of barbs having tissue-penetrating distal ends,

wherein the elongated substrate has the form of a tube comprising an interior lumen formed by the first surface.

36. (Currently Amended) The apparatus of claim 35, wherein the elongated substrate further comprises a coating of a the therapeutic agent.

37. (Currently Amended) The apparatus of claim 35, wherein the elongated substrate is impregnated with a the therapeutic agent.

38. (Previously Presented) The apparatus of claim 35, wherein each barb includes a shank coupling the tissue-penetrating distal end to the substrate, and one or more projections from the shank.

39. (Previously Presented) The apparatus of claim 38, wherein each barb is cut from the substrate.

40. (Previously Presented) The apparatus of claim 35 further comprising a stent-like structure, wherein the elongated substrate forms a side anastomosis site of the apparatus.

41. (Currently Amended) Apparatus for closing a wound comprising:

an elongated substrate comprising a biocompatible material and a therapeutic agent, the elongated substrate having a first surface; and

multiple rows of barbs projecting from the first surface, the multiple rows of barbs having tissue-penetrating distal ends,

wherein the elongated substrate has the form of a tube comprising an exterior surface formed by the first surface.

42. (Currently Amended) The apparatus of claim 41, wherein the elongated substrate further comprises a coating of a the therapeutic agent.

43. (Currently Amended) The apparatus of claim 41, wherein the elongated substrate is impregnated with a the therapeutic agent.

44. (Previously Presented) The apparatus of claim 41, wherein each barb includes a shank coupling the tissue-penetrating distal end to the substrate, and one or more projections from the shank.

45. (Previously Presented) The apparatus of claim 44, wherein each barb is cut from the substrate.

46. (Previously Presented) The apparatus of claim 41 further comprising a stent-like structure, wherein the elongated substrate forms a side anastomosis site of the apparatus.

47.-54. (Canceled)

55. (Previously Presented) Apparatus for repairing cartilage comprising:

an elongated substrate comprising a biocompatible material, the elongated substrate having a first surface, a multiplicity of barbs projecting from the first surface, the multiplicity of barbs having tissue-penetrating distal ends; and a region of artificial cartilage coupled to the elongated substrate.

56. (Previously Presented) The apparatus of claim 55, wherein the elongated substrate further comprises a coating of a therapeutic agent.

57. (Previously Presented) The apparatus of claim 55, wherein the elongated substrate is impregnated with a therapeutic agent.

58. (Previously Presented) The apparatus of claim 55, wherein each one of the multiplicity of barbs includes a shank coupling the tissue-penetrating distal end to the substrate, and one or more projections from the shank.

59. (Previously Presented) The apparatus of claim 58, wherein the multiplicity of barbs are cut from the substrate.

60. (Previously Presented) Apparatus for repairing an intervertebral disc comprising:



an elongated substrate comprising a biocompatible material, the elongated substrate having a first surface, a multiplicity of barbs projecting from the first surface, the multiplicity of barbs having tissue-penetrating distal ends; and a replacement intervertebral disc coupled to the elongated substrate.

61. (Previously Presented) The apparatus of claim 60, wherein the elongated substrate further comprises a coating of a therapeutic agent.

62. (Previously Presented) The apparatus of claim 60, wherein the elongated substrate is impregnated with a therapeutic agent.

63. (Previously Presented) The apparatus of claim 60, wherein each one of the multiplicity of barbs includes a shank coupling the tissue-penetrating distal end to the substrate, and one or more projections from the shank.

64. (Previously Presented) The apparatus of claim 63, wherein the multiplicity of barbs are cut from the substrate.

65. (Previously Presented) The apparatus of claim 60 further comprising a region of artificial cartilage coupled to the elongated substrate.